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Anti-Phospholipase D4 Antibody

Catalog # AP60360

Product Information

Application	WB, IHC
Primary Accession	Q96BZ4
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55626

Additional Information

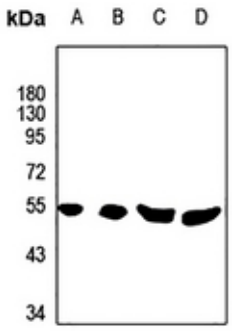
Gene ID	122618
Other Names	C14orf175; Phospholipase D4; PLD 4; Choline phosphatase 4; Phosphatidylcholine-hydrolyzing phospholipase D4
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Phospholipase D4. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

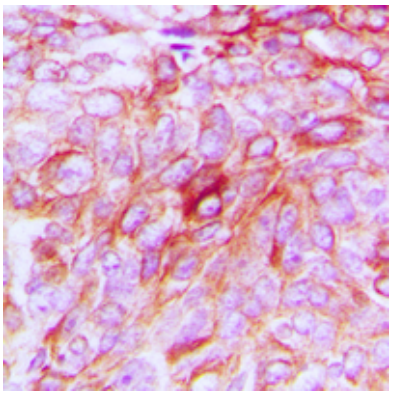
Name	PLD4 {ECO:0000303|PubMed:30111894, ECO:0000312|HGNC:HGNC:23792}
Function	Lysosomal 5'->3' exonuclease that functions in nucleic-acid sensing by immune cells. Hydrolyzes phosphodiester bond in single- stranded RNA and DNA molecules, with a higher efficiency for molecules with 5' uridine and guanosine residues. It can stall at certain sites and does not necessarily proceed to complete exonucleolytic degradation, thereby producing nucleoside 3'-monophosphates but also 5'-end 5'-hydroxy deoxyribonucleotide/ribonucleotide fragments (PubMed:30111894, PubMed:34620855, PubMed:38537643, PubMed:38697119, PubMed:40931063). Through the processing of self and exogenous RNA and DNA molecules, provides molecular signals to toll-like receptors (TLRs) in innate immunity. Partially redundant with PLD3, it cooperates with the RNase T2/RNASET2 to generate 2',3'-cGMP and cytidine-rich RNA fragments that occupy the two TLR7 ligand-binding pockets, to trigger receptor activation and signaling (PubMed:38697119). Can exert polynucleotide phosphatase activity

	toward 5'-phosphorylated single- stranded DNA substrates although at a slow rate (PubMed:38537643). Could play a role in phagocytosis of activated microglia (By similarity).
Cellular Location	Lysosome. Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q8BG07}; Single- pass type II membrane protein {ECO:0000250|UniProtKB:Q8BG07}. Golgi apparatus, trans-Golgi network membrane {ECO:0000250|UniProtKB:Q8BG07}; Single-pass type II membrane protein {ECO:0000250|UniProtKB:Q8BG07} Nucleus {ECO:0000250|UniProtKB:Q8BG07}. Early endosome {ECO:0000250|UniProtKB:Q8BG07}. Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:Q8BG07}. Note=Activation of microglia induces translocation of PLD4 from the nucleus to the phagosomes {ECO:0000250|UniProtKB:Q8BG07}
Tissue Location	Expressed in plasmacytoid dendritic cells and monocytes (at protein level).

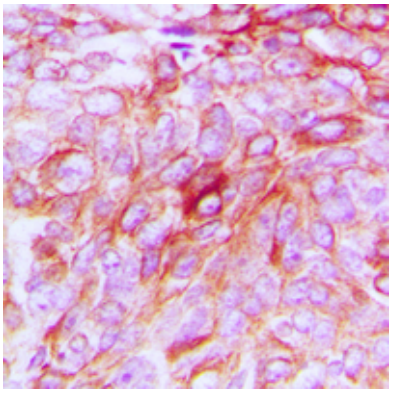
Images



Western blot analysis of Phospholipase D4 expression in PC12 (A), CT26 (B), Hela (C), A549 (D) whole cell lysates. (Predicted band size: 55 kD; Observed band size: 55 kD)



Immunohistochemical analysis of Phospholipase D4 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.